

- **Complete the following questions as a start of your review for the exam.**

1. When magnesium ribbon burns, there is a bright white glow and a lot of energy is released, heating the surrounding air. The white powder produced is magnesium oxide. The change that takes place is best described as an:

- A endothermic chemical reaction
- B exothermic chemical reaction.

2. Chemical reactions in which a lot of energy is released in a very short time are best described as:

- A endothermic
- B corrosive
- C explosive
- D dynamic.

3. Name a device or other object whose major purpose is to convert:

- (a) chemical energy into kinetic energy
- (b) chemical energy into light energy
- (c) potential energy into kinetic energy.

4. Dynamite is one of the most well known chemicals used in the explosives industry.

- (a) Is the use of dynamite in demolishing a building an example of an endothermic or exothermic process? How do you know?
- (b) List four forms of energy that chemical energy is converted to during a dynamite explosion.

5. What is the difference between chemical and physical change in a chemical reaction?

6. The flow of electric charge in an electric circuit is called:

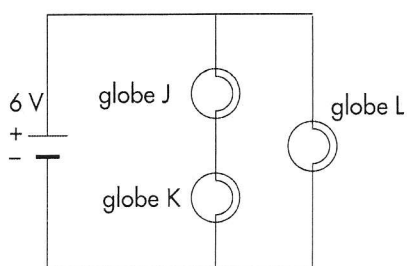
- A electric current
- B electric power
- C resistance
- D voltage.

7. An ammeter is used to measure:

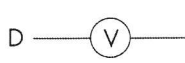
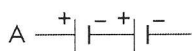
- A electrical energy
- B resistance
- C voltage
- D electric current.

8. If the filament in light-globe K shown in the following circuit diagram breaks:

- A globes J and L will both stop glowing
- B globes J and L will continue to glow
- C globe J will stop glowing and globe L will continue to glow
- D globe L will stop glowing and globe J will continue to glow

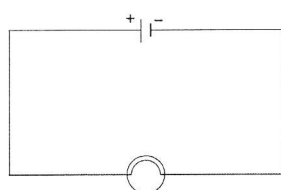


9. State which part of an electric circuit is represented by each of the following symbols

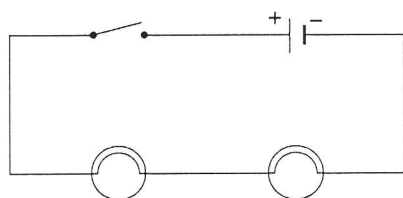


10. In a light bulb, what two forms of energy is electrical energy changed into?

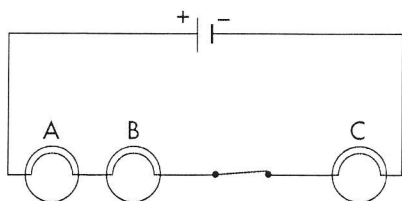
11. Draw a circuit diagram to show where a voltmeter and ammeter should be placed in the following circuit to correctly measure the voltage across the globe and the current flowing through it. Use + and – signs on the meter symbols.



12. Describe the circuit shown below in words.



13. In the electric circuit below, which lamps will stop glowing if the switch is opened?

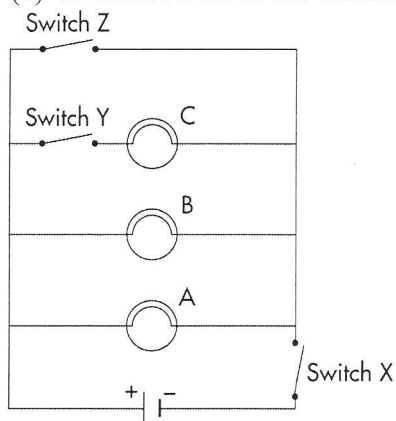


14. Draw (a) a series and (b) a parallel circuit, with a 12 volt battery and three globes in each. Explain what would happen if one globe 'blew' in each circuit.

15. The circuit diagram below shows three lamps A, B and C connected in parallel. Three open switches X, Y and Z are added to the circuit as shown in the diagram.

Which of the three lamps will glow if?

- (a) only switch X is closed
- (b) switches X and Y are both closed while switch Z remains open
- (c) all three switches are closed?



16. (a) What is the name of the gap between neighbouring neurons?

(b) What is the name of the special chemicals that pass chemicals between your nerve cells?

17. The special nerve endings in your skin are called:

- A reflexes
- B receptors
- C stimuli
- D synapses.

18. Explain the difference between the central nervous system and the peripheral nervous system

19. How are nerves different from neurons?

20. What is the purpose of each of these types of neuron?

- (a) sensory neuron
- (b) interneuron
- (c) motor neuron

21. Acids generally:

- A taste bitter
- B taste sour
- C feel slippery
- D are coloured.

22. Bases:

- A unlike dangerous acids, are generally quite safe
- B are just a stronger type of acid
- C are found in citrus fruits
- D are used in many cleaning products.

23. When an acid and base react together, which substances would you always expect to be produced?

- A a salt and oxygen gas
- B a salt and hydrogen gas
- C a salt and water
- D water and carbon dioxide
- E water, a salt and carbon dioxide

24. Match each hormone to the functions it controls.

- | | |
|-------------------------------|----------------------------------------|
| 1. Testosterone | A. female sexual development |
| 2. Thyroxin | B. water balance |
| 3. Antidiuretic hormone (ADH) | C. rate of chemical reactions in cells |
| 4. Adrenalin | D. male sexual development |
| 5. Oestrogen | E. readiness for flight or fight |
| 6. Insulin | F. blood glucose levels |